Medical School Hotline

A Complementary Alternative Medicine (CAM) Medical School Curriculum

Cathy K. Bell MD and Sandy Tsuhako

The growing interest in complementary alternative medicine (CAM) over the past three decades is documented in Eisenberg's study from 1990 – 1997. He found that alternative practitioner visits surpassed the number of visits to primary care physicians in the U.S. and the cost of alternative medicine care, more than 21 billion dollars, exceeded the amount spent on all hospital-related care in the U.S.[1] In 2000, Americans spent more money on alternative medicine therapies than they spent out-of-pocket in the entire allopathic medical system.[2] The extensive medical literature on this topic, the creation of the National Center for Complementary and Alternative Medicine (NCCAM) within the National Institute of Health (NIH), and the trend of third party payer reimbursement for CAM modalities, are further evidence of this increased public awareness and interest.

Complementary alternative medicine has also become prominent in medical education. Fifty-six out of 125 medical schools surveyed between 1995 – 97 had relevant CAM curricula, despite the lack of curriculum standards.[3] In a CAM survey, most medical students had been exposed to CAM therapies, knew that the majority of Americans used CAM, believed that some CAM therapies were useful, and did not believe that CAM therapies were dangerous.[4] Possible reasons for the development of CAM curricula may include the high prevalence of CAM use, the potential danger in drug-drug interactions, and the increased questioning by patients on this topic. The failure of Western medicine to adequately address certain medical conditions, such as chronic illnesses, psychosocial concerns and psychiatric disorders, and chronic pain[5] may make physician educators more open to considering alternative approaches. Kleinman explains that the appeal of CAM lies in its social science "worldview". This worldview model focuses on healing, in contrast to curing. It views illness as a subjective experience that is influenced by social, cultural, family, as well as individual factors. Thus, the meaning of the illness to the individual is of utmost importance. This is contrasted to the biomedical model that focuses on a cure and the eradication of disease.[6] Many medical student surveys indicate that between 60-80% of medical students are interested in CAM and 30-50% want to learn how to incorporate CAM in their clinical practice.[4] As a result, the interest in CAM in medical school curricula will most likely continue to increase.

The enthusiasm of the majority of medical students and some medical educators is met with equally fervent concern and criticism by some physicians. One study found that medical and non-medical students did not differentiate between treatments that are supported by scientific evidence and those with questionable efficacy. The students also did not strongly support the need for scientific evaluation in determining treatment efficacy.[7] Thus, the concern of whether or not medical students are likely to apply their critical appraisal skills to the CAM literature, as they do in other areas of medicine, is raised. The literature is also lacking in scientifically rigorous efficacy studies on CAM. Fifty-two out of the 56 CAM courses taught in U.S. medical schools were presented in a positive light, despite the lack of evidence of efficacy.[3] The medical student's ability to discern effective versus non-effective therapies obviously impacts their clinical recommendations. Since many patients value their physician's opinion, they are more likely to use alternative practices that are supported by their physician, possibly to the exclusion of effective allopathic approaches.

At the University of Hawaii John A. Burns School of Medicine, CAM has been introduced into their problem-based learning (PBL) curriculum to some extent. There is one session on la'au lapa'au (Native Hawaiian herbal medicine) presented by two Native Hawaiian herbal medicine practitioners. Alternative practices such as chiropractic, herbal medicine, and the use of shark cartilage are also included in the PBL curriculum. However, learning issues on alternative practices are often not generated due to competing biomedical topics covered in the cases. In addition, tutors have not received formal training on CAM practices and specific learning objectives for CAM curriculum have not been developed. Thus, tutors may not recognize the importance of CAM in medical education and may not know how to promote effective learning in this area. Finally, the evaluation methods used do not measure how much the student learned about CAM practices, which lessens the students' motivation to learn about this topic.

Given the multicultural population in Hawaii , the existing health disparities among ethnic minority groups, and the recent creation of a Department of Integrative Medicine at the University of Hawaii, examination of culturally appropriate CAM approaches is essential. Each ethnic group has traditional healing approaches that have been used effectively for thousands of years prior to Western medicine. If these traditional approaches were shown to be efficacious, they would add to the medical armamentarium and assist in the restoration of health to minority populations, who fare worse, despite the many technological advances in medicine.

As alluded to above, CAM can be viewed as a means of providing culturally competent care. Cultural competence has been defined as "a set of academic and interpersonal skills that allow individuals to increase their understanding and appreciation of cultural differences and similarities within, among, and between groups ".[8] Simply put, "the ability to walk in someone else's shoes". These cultural similarities refer not only to ethnicity, but any similarities shared by a group of people, such as age, gender, religion, immigration status, sexual orientation, history, education and socioeconomic status. In their role of patient advocate, physicians need to understand the culture of CAM users if they are to communicate effectively with and care for these patients. One caveat to remember, however, is that despite group membership, each individual has his unique culture based on his multiple group memberships and past experiences. Therefore, caution must be exercised when making generalizations about an individual based on a specific group membership. Kleinman alluded to this in his cultural construction of clinical reality, in which he describes the clinical encounter as involving the experiences, education, beliefs, worldview, biases, history and culture of both the physician and patient.[6] The culture of the encounter, whether it be a Western or alternative focus, also influences the interaction. This

highlights the complexity of a clinical encounter and the need to recognize the various forces that are interacting and simultaneously impacting a patient's subjective illness, disease and response to treatment. If physicians are to understand, care for and advocate for their patients, and if the majority use alternative practices, medical students, residents and physicians will need some understanding of CAM.

Since CAM has had monumental impact in the U.S. and it is not likely to disappear, it seems prudent to provide instruction to medical students to help them navigate the abundant information and misinformation they will encounter on this topic. Recommendations have included encouraging students to use the same critical appraisal skills as they have been trained to use to evaluated scientific studies[3] and developing required curricula that provide medical students with the conceptual basis, efficacy and safety of alternative therapies.[9] This will enable physicians to assist their patients in making an informed decision on a particular treatment or intervention. This is no different than what physicians are expected to do in obtaining informed consent from their patients in choosing a therapeutic intervention. Ongoing scientifically rigorous studies need to be conducted on the efficacy and safety of alternative treatments, including native healing practices. It is imperative that whether instructing students or informing patients, physicians remember that their role is to provide the learner with the tools to make the best decision possible with the available information. Specifically for medical students, it is more important to give them the tools, than to provide them with knowledge that will quickly become outdated by the time they enter practice. This is a fundamental tenet of problem-based learning.

The literature focuses mostly on didactic teaching methods. Active learning techniques may be more effective, such as case-based and problem-based learning. Videos, hands-on experiences and demonstrations by alternative practitioners may also encourage more active participation by the medical students. Role playing, scenarios and standardized patient interactions would allow the students to practice responding to patients' questions about CAM. Adequate time at the end of the learning experience should be provided for discussion on medical students' reactions, efficacy and safety. This may lead naturally into journal club meetings focused on critically evaluating alternative medicine literature. Regardless of the chosen format, clear goals & objectives, fun & interactive learning experiences, and meaningful evaluation will maximize the success of the CAM curriculum. This type of curriculum should naturally lead to the development of critical appraisal skills in the context of CAM and increased comfort in discussing CAM with their patients that will ultimately enhance medical students' abilities in providing culturally competent care as future physicians.

References

1. Eisenberg DM, Davis RB, Ettner SL et al. Trends in alternative medicine use in the United States, 1990-1997. Journal of the American Medical Association 1998; 280(18): 1569-1575.
2. Dworkin RW. Science, Faith, and Alternative Medicine. Policy Review 2001. No. 108:1-12. (? Earl)
3. Sampson W. The Need for Educational Reform in Teaching about Alternative Therapies. Academic Medicine 2001; 76: 248-250.
4. Chez RA, Jonas WB, Crawford C. A survey of medical students' opinions about complementary and alternative medicine. American Journal of Obstetrics and Gynecology 2001; 185(3): 754-7.
5. Astin JA. Why patients use alternative medicine: Results of a national study. Journal of the American Medical Association 1998; 279(19): 1548-1553.
6. Kleinman A, Eisenberg L, Good B. Clinical Lessons from Anthropologic and Cross-Cultural Research. Annals of Internal Medicine 1978; 88:251-258.
7. Yardley L, Furnham. Attitudes of Medical and Nonmedical Students Toward Orthodox and Complementary Therapies: Is Scientific Evidence Taken into Account? The Journal of Alternative and Complementary Medicine 1999; 5(3): 293-295
8. Cultural Competence for Evaluators: A Guide for Alcohol and Other Drug Abuse Prevention Practitioners Working with Ethnic/Racial Communities. Rockville, Maryland: US Department of Health and Human Services, 1992.
9. Marcus DM. How Should Alternative Medicine Be Taught to Medical Students and Physicians? Academic Medicine 2001; 76:224-229.